



Maths

Properties of Shapes

Need a coherently planned sequence of lessons to complement this resource?

Lesson Breakdown

Below is our suggestion for the most coherent and progressive sequence to teach this area of Planit Maths steps on the White Rose Maths scheme of learning although we have not aimed to mirror the exact order in which the resources are presented.

Recall and Use Facts (1): Number Facts up to 10

This computer game themed lesson is designed to help children secure their number facts. Children use a range of methods to investigate and check if their facts are correct. Differentiated activity sheets and mastery cards to help children.

NC Statement: Recall and use facts to 20 fluently and derive and use related facts up to 100.

Lesson Aim: To recall and use number facts up to 10.

Recall and Use Facts (2): Number Facts up to 20

This lesson teaches children to use familiar number facts to solve and create number problems. Children are encouraged to use different representations to support their learning. Differentiated activity sheets and mastery cards to help children develop fluency.

NC Statement: Recall and use facts to 20 fluently and derive and use related facts up to 100.

Lesson Aim: To recall and use number facts up to 20.

Solve Problems (1): Using Different Representations to Solve Problems

Children learn to solve addition and subtraction problems using concrete objects and pictorial representations, including those involving numbers, quantities and measures, applying their increasing knowledge of mental and written methods. This lesson includes Diving into Mastery activity cards with fluency reasoning.

NC Statement: Solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures, applying their increasing knowledge of mental and written methods.

Lesson Aim: To solve addition and subtraction problems using objects, pictures and models.

Introduction

In this unit, children will learn to recall and use addition and subtraction facts. They use a variety of different models, images and equipment to build their number sense, enabling them to use facts flexibly. They learn different strategies to help them add and subtract numbers efficiently, explaining their methods with concrete resources or jottings. Methods include: adding a unit to a ten, adding three single-digit numbers and adding and subtracting multiples of ten leading to pairs of two-digit numbers. They find the difference between numbers and reason about when it is quicker to find the difference or take away. They build up their understanding of commutativity and inverse relationships, using these to solve increasingly complex missing number problems. They apply their learning to problem-solving, and are able to ask questions, explain their choices and demonstrate their methods.

Resources

In addition to your standard maths resources, you will need:

- digital cameras

Assessment Statements

By the end of this unit;

children working towards the expected level will be able to:

- recall and use at least four out of six number facts to ten and derive their associated subtraction facts;
- add and subtract two-digit numbers and ones, and two-digit numbers and tens, where no regrouping is required;
- explain their addition and subtraction methods verbally, in pictures or using apparatus;
- understand that two numbers can be added in any order and the answer will be the same.

children working at the expected level will be able to:

- recall number facts to add and within ten and subtraction facts. Use these to derive number facts to add and within 20 and 100;
- add and subtract within 100: a two-digit number and ones, a two-digit number and tens, two two-digit numbers;
- add three one digit numbers using efficient methods;
- understand that addition is commutative but subtraction is not, and explain what this means;
- use the inverse relationship between addition and subtraction to solve problems and check their calculations;
- solve addition and subtraction problems in context of quantities and measures, using pictures and mentally.

Addition and Subtraction

Maths | Year 2 | Steps to Progression Overview

The aim of this overview is to support teachers using Planit Maths to show the most coherent and progressive sequence to teach each area of maths. We also want to fully support teachers who use the White Rose Maths scheme of learning to make full use of the resources available within Planit Maths. Wherever possible, lesson packs have been matched to each of the small steps on the White Rose Maths scheme of learning.

Yearly Overview

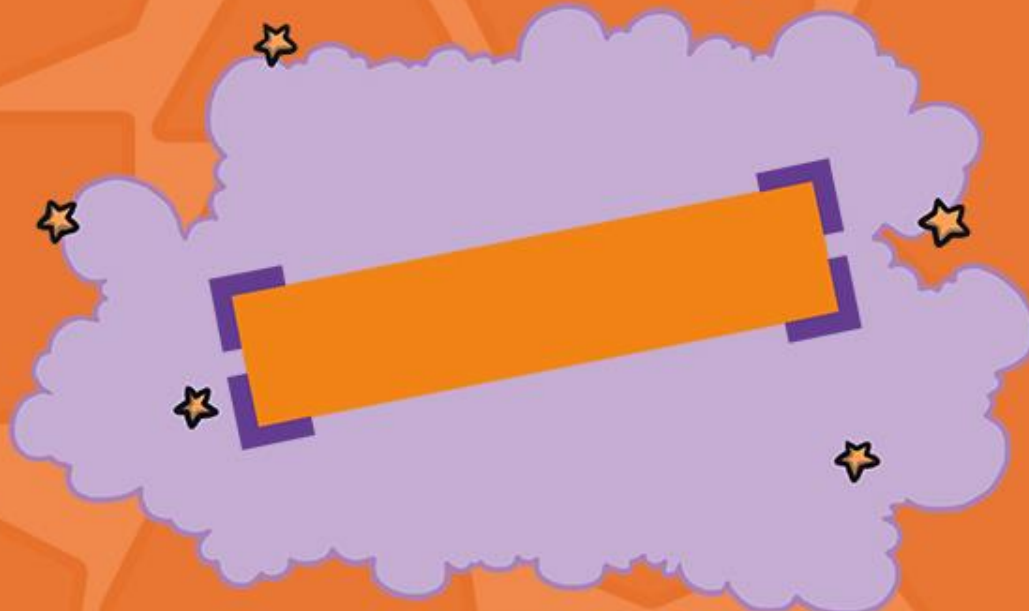
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value		Number: Addition and Subtraction					Measurement: Money		Number: Multiplication and Division		
Spring	Number: Multiplication and Division		Statistics		Geometry: Properties of Shape			Number: Fractions		Measurement: Length and Height		
Summer	Position and Direction		Problem Solving and Efficient Methods		Measurement: Time		Measurement: Mass, Capacity and Temperature		Investigations			

See our [Properties of Shapes Steps to Progression](#) document.

Twinkl Planit is our award-winning scheme of work with over 4000 resources.



Recognise More 2D Shapes



twinkl

Aim

- To describe the properties of 2D shapes.

Success Criteria

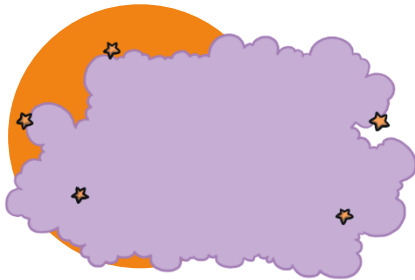
- I can name common 2D shapes.
- I can describe the properties of 2D shapes using the words 'sides' and 'vertices'.
- I can recognise quadrilaterals by counting their sides and vertices.

Remember It

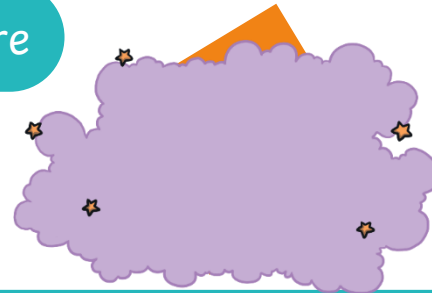


Can you identify the 2D shapes from the parts you can see?
Click the shape to reveal the answer.

circle



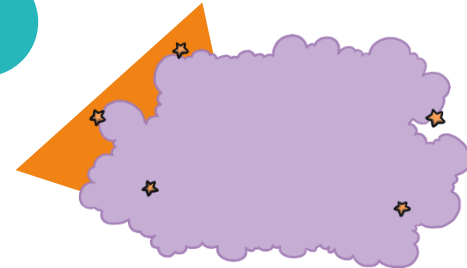
square



rectangle



triangle



Can you name these shapes and describe their properties?

Vertices



Before, we used the word **corner** to name the point where 2 sides meet.
How many corners does this 2D shape have?



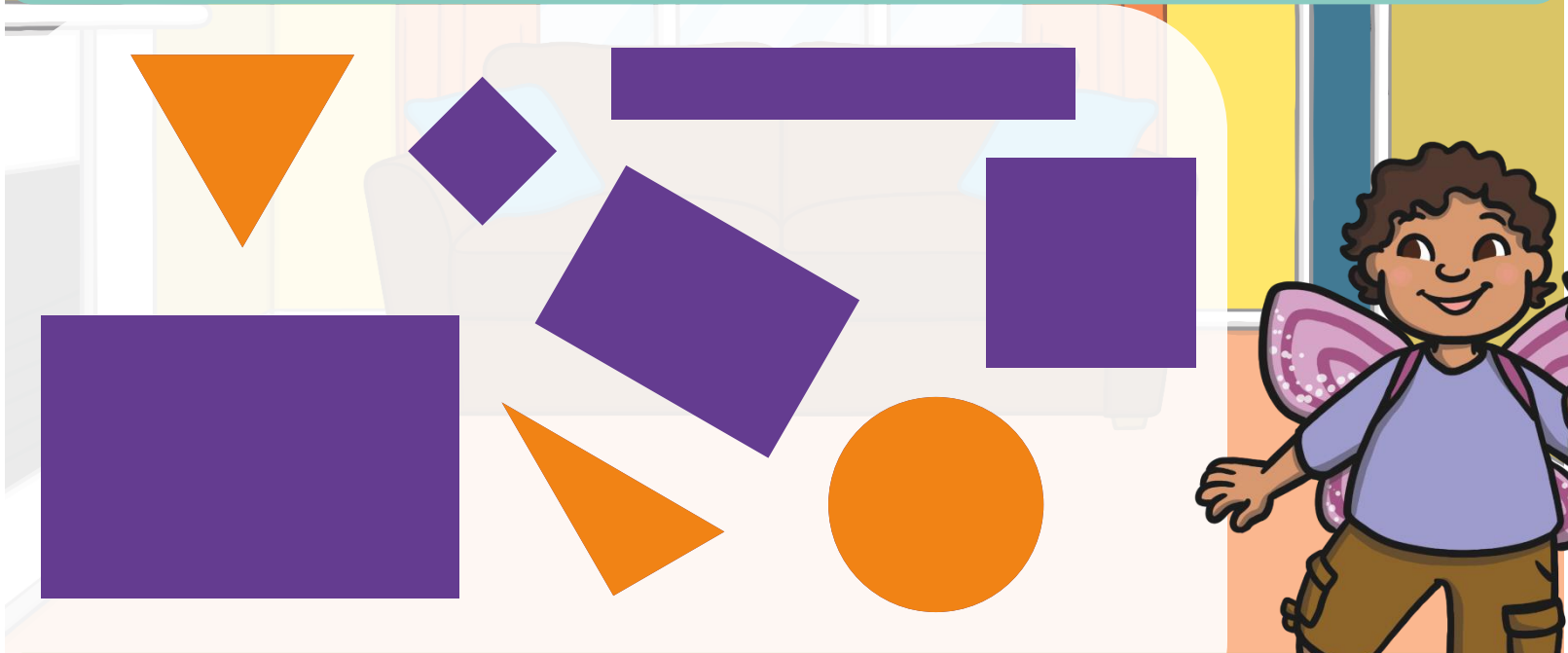
Now, we learn the mathematical term for a corner. One corner is called a **vertex**. If we have more than one, we use the word **vertices**.

This rectangle has **4 vertices**.

Vertices



These shapes all have 4 vertices. **True or false?**
Explain how you know.



False. A circle has no vertices. A triangle has 3 vertices.

Quadrilaterals



Quadrilaterals are shapes with **4 sides** and **4 vertices**. The 4 sides are always straight. Do you know any quadrilaterals already?



A rectangle is a quadrilateral.



A square is a quadrilateral.

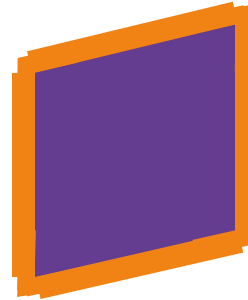
Let's check they each have 4 vertices.

Let's check they each have 4 sides.

Quadrilaterals



Quadrilaterals are shapes with **4 sides** and **4 vertices**.
Are these shapes **quadrilaterals**?



They are quadrilaterals because they have 4 sides and 4 vertices.

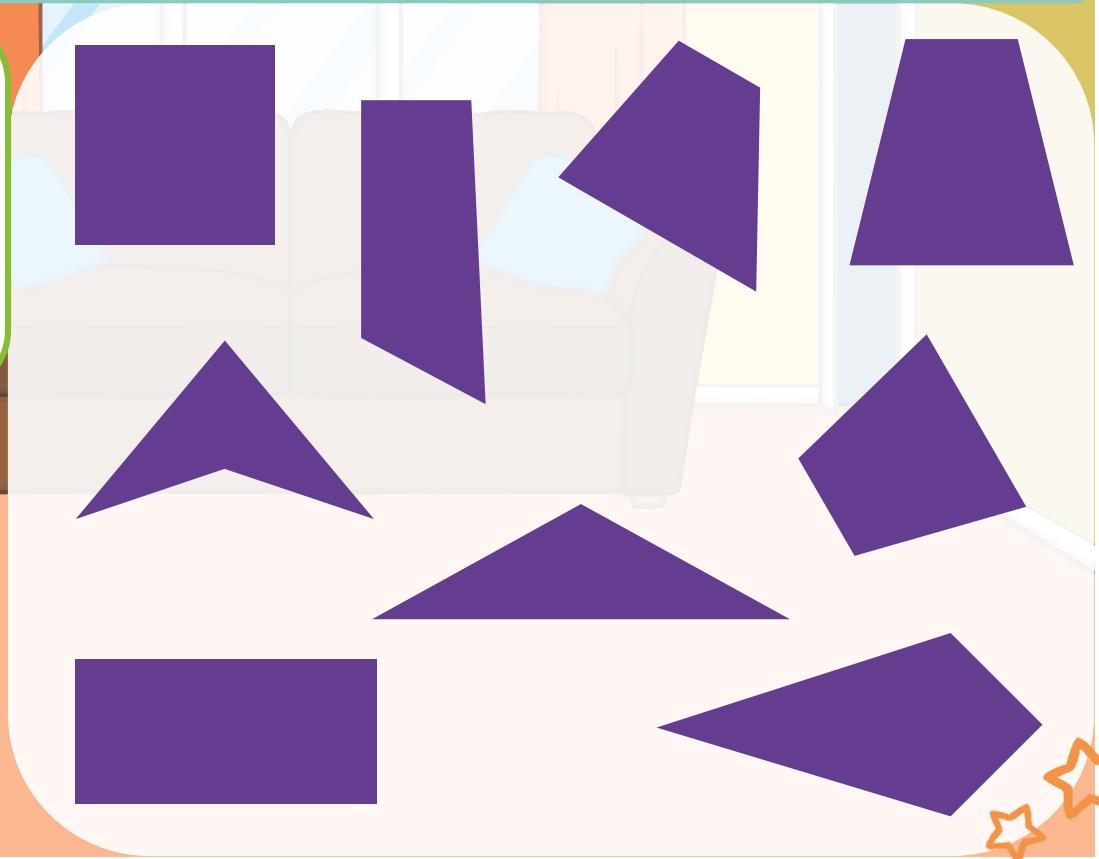
Explain how you know.

Quadrilaterals



Here are some 2D shapes. Which is the odd one out? Why?

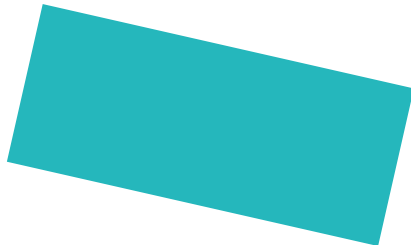
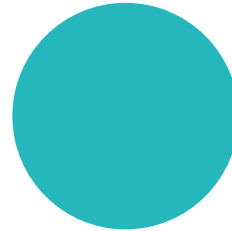
The triangle is the odd one out because it has 3 sides and 3 vertices. Therefore, it is not a quadrilateral.



Guess My Shape

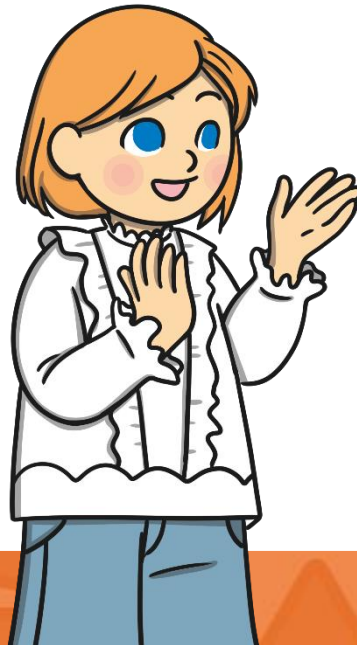


Choose a shape and describe it to your partner.
Can they guess which one you have described?

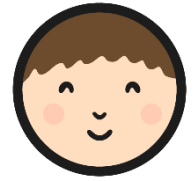


Words to use:

vertices
sides
curved
straight
long
short
quadrilateral



Describe 2D Shapes



Describe 2D Shapes

To describe the properties of 2D shapes.

Draw lines to match the shape and the

	2 short

Tick all the quadrilaterals and name any of the s



circle, triangle, square, rectangle, qua

Describe 2D Shape

To describe the properties of 2D shapes.

Fill in the empty boxes.

Word bank: quadrilateral, square, circle, triangle

Shape	Name	Number of Sides

Describe 2D Shapes

To describe the properties of 2D shapes.

Find one thing that is the same about the shapes in each row.
Then, tick the odd one out. Explain why it is different.



Diving into Mastery



Dive in by completing your own activity!



Describe More 2D Shapes

Colour each of these labels with different colours and then colour the shapes to match.

0 vertices	3 sides	4 vertices
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The activity sheet shows a collection of 2D shapes: a horizontal rectangle, a circle, a square, a circle, a triangle, a parallelogram, a trapezoid, a square, a triangle, and a circle. The shapes are scattered across the page, some overlapping clouds.

Aim



- To describe the properties of 2D shapes.

Success Criteria

- I can name common 2D shapes.
- I can describe the properties of 2D shapes using the words 'sides' and 'vertices'.
- I can recognise quadrilaterals by counting their sides and vertices.

